Section 4-1: Classifying Triangles

By the end of this lesson, you should be able to answer:
- How do you identify and classify triangles by angle measures?
- How do you identify and classify triangles by side measures?

Define the following:

1. Acute Triangle

2. Equiangular Triangle

3. Obtuse Triangle

4. Right Triangle

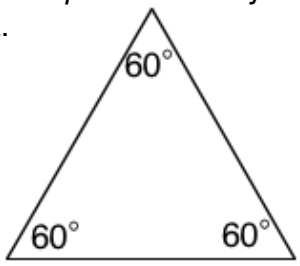
5. Equilateral Triangle

6. Isosceles Triangle

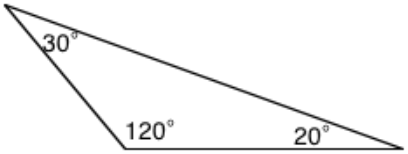
7. Scalene Triangle

Example 1: Classify each triangle as *acute*, *equiangular*, *obtuse*, or *right*.

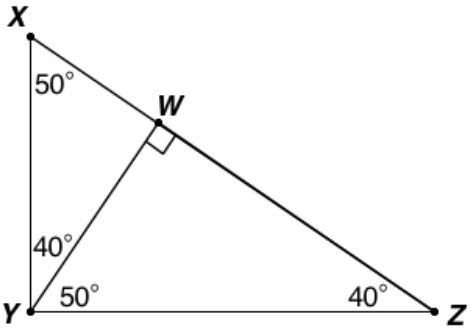
a.



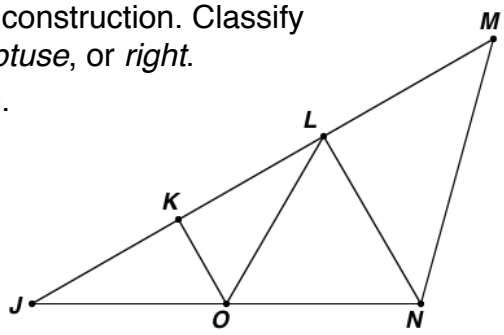
b.



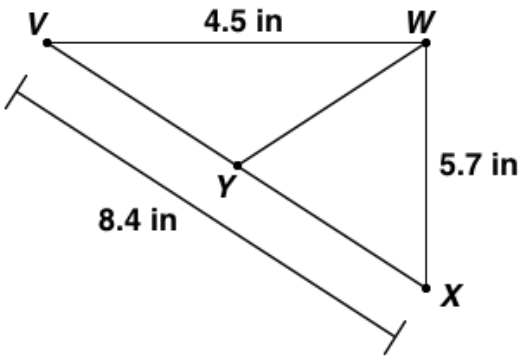
Example 2: Classify $\triangle XYZ$ as *acute*, *equiangular*, *obtuse*, or *right*. Explain your reasoning.



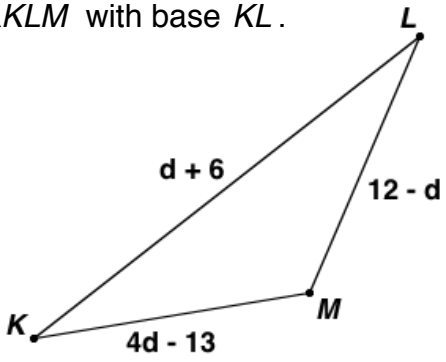
Example 3: The triangular truss is modeled for steel construction. Classify $\triangle JMN$, $\triangle JKO$, and $\triangle OLN$ as *acute*, *equiangular*, *obtuse*, or *right*. Explain your reasoning. This figure is drawn to scale.



Example 4: If point Y is the midpoint of $\overline{VX}$, and $WY = 3$ in., classify $\triangle VWY$ as *equilateral*, *isosceles*, or *scalene*. Explain your reasoning.



Example 5: Find the measure of the sides of isosceles $\triangle KLM$ with base $\overline{KL}$.



Problem Set:

"Do not listen to those who weep and complain, for their disease is contagious." - Og Mandino